

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/971,990	10/04/2001	Stephen W. Edge	2001 P 14495 US

**Response To Official Action**

EXAMINER
Tieu, Binh Kien

ART UNIT	PAGE NUMBER
2614	3

**AMENDMENTS TO THE CLAIMS**

1. (Currently Amended) A method for updating timing information in a wireless communication network of base stations, where each base station maintains timing information, comprising:

~~detecting~~ receiving, at ~~[[a]]~~ at least one mobile unit in an area serviced by a base station,

the timing information maintained by the respective base station; and

signal data containing accurate timing information, ~~said signal data~~

~~received~~ from a source other than a base station;

deriving accurate timing information from ~~said~~ the signal data received at the mobile unit;

~~generating association data associating said~~ for each mobile unit, creating an

association comprising the accurate timing information ~~with base station and the~~ timing

information ~~maintained by said~~ received from the base station; and

in response to the association, updating network the timing information ~~for said~~

maintained by at least one base station ~~using said association data~~.

2. (Cancelled)

3. (Currently Amended) The method of claim 1, ~~further comprising~~ updating

~~network timing information for a plurality of base stations in said wireless communication~~

~~network in said~~ providing at least a portion of the association to at least one base station in the

wireless communication network.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/971,990	10/04/2001	Stephen W. Edge	2001 P 14495 US

**Response To Official Action**

EXAMINER
Tieu, Binh Kien

ART UNIT	PAGE NUMBER
2614	4

4. (Currently Amended) The method of claim 3, ~~further comprising; forwarding portions of said network timing information to said~~ providing at least a portion of the association to a plurality of base stations in said the wireless communication network.

5. (Currently Amended) The method of claim 1, ~~wherein said~~ where receiving signal data ~~[[is]]~~ comprises receiving global positioning satellite ~~(GPS)~~ signal data.

6. (Currently Amended) The method of claim 5, ~~wherein said detecting signal data containing accurate timing information comprises;~~ where receiving global positioning satellite signal data comprises receiving the data [[,]] via a GPS global positioning satellite antenna [[,]] GPS signal data or a wireless communications antenna.

7. (Currently Amended) The method of claim 5, 6, ~~wherein said~~ where deriving accurate timing information from ~~said the~~ signal data comprises ~~[[:]]~~ deriving the GPS timing information from the GPS signal data in said , at the mobile unit.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO. 09/971,990	FILING DATE 10/04/2001	FIRST NAMED INVENTOR Stephen W. Edge	ATTORNEY DOCKET NO. 2001 P 14495 US
-------------------------------	---------------------------	---	--

**Response To Official Action**

EXAMINER Tieu, Binh Kien
-----------------------------

ART UNIT 2614	PAGE NUMBER 5
------------------	------------------

8. (Currently Amended) The method of claim 5, ~~wherein said deriving accurate timing information from said signal data comprises: deriving GPS timing information from said GPS signal data at a central network authority~~

further comprising

identifying the base station providing timing information;

forwarding the identity of the base station, the timing information received from the base station, and the accurate timing information derived from the signal data, to a central authority; and

creating the association at the central network authority, where the association further comprises the identity of the base station.

9. (Currently Amended) The method of claim ~~[[7]]~~ 5, ~~wherein said generating association data further comprises:~~

~~identifying the base station time at which said GPS signal data is detected;~~

~~forwarding said base station time along with said GPS timing information to a central network authority; and~~

~~generating association data at a central network authority~~  
where deriving accurate timing information from the signal data comprises deriving the information from the signal data, at a central network authority.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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09/971,990	10/04/2001	Stephen W. Edge	2001 P 14495 US

**Response To Official Action**

EXAMINER
Tieu, Binh Kien

ART UNIT	PAGE NUMBER
2614	6

10. (Currently Amended) The method of claim ~~[[8]]~~ 9, ~~wherein said generating association data further comprises:~~ further comprising  
~~identifying the base station time at which said GPS signal data is detected;~~  
~~forwarding said base station time along with said GPS timing information to a central network authority;~~  
identifying the base station providing timing information;  
forwarding the identity of the base station, the timing information received from the base station, and the signal data, to the central authority; and  
~~generating association data at a~~ creating the association at the central network authority,  
where the association further comprises the identity of the base station.

11. (Currently Amended) The method of claim 1, ~~wherein said generating association data is performed at said mobile unit, the method further comprising: forwarding said association data where~~  
creating an association comprises creating an association at the mobile unit ; and  
further comprising providing the association to a central network authority.

12. (Currently Amended) The method of claim ~~[[1]]~~ 11, ~~wherein said association data is stored at a~~ further comprising storing the association at the central network authority.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/971,990	10/04/2001	Stephen W. Edge	2001 P 14495 US

**Response To Official Action**

EXAMINER
Tieu, Binh Kien

ART UNIT	PAGE NUMBER
2614	7

13. (Currently Amended) The method of claim [[1]] 12, ~~wherein said association data is used to update data at a central network authority~~ further comprising updating the stored association.

14. (Currently Amended) The method of claim 1, ~~further comprising: repeating said generating and updating each time a mobile unit in said network detects~~ where receiving signal data containing accurate timing information comprises repeatedly receiving signal data.

15. (Currently Amended) The method of claim 1, ~~further comprising: repeating said generating and updating each time a mobile unit in said network is instructed to detect~~ where receiving signal data containing accurate timing information comprises selectively receiving signal data.

16. (Currently Amended) The method of claim 1, further comprising ~~: forwarding a portion of said network timing information to a second~~ providing the association to another mobile unit.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO. 09/971,990	FILING DATE 10/04/2001	FIRST NAMED INVENTOR Stephen W. Edge	ATTORNEY DOCKET NO. 2001 P 14495 US
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**Response To Official Action**

EXAMINER Tieu, Binh Kien
-----------------------------

ART UNIT 2614	PAGE NUMBER 8
------------------	------------------

17. (Currently Amended) A network timing system for a wireless communication network of base stations, where each base station maintains timing information, comprising:

~~a receiver at a~~ at least one mobile unit in an area served by a base station, ~~said the~~ mobile unit comprising

a first receiver comprising means for receiving timing information maintained by the respective base station; and

a second receiver configured to detect comprising means for receiving signal data from a source other than a base station, the signal data comprising containing accurate timing information, ~~said signal data received from a source other than a base station~~ ;

~~a processing device configured to derive~~ comprising means for deriving accurate timing information from said the signal data received at the mobile unit; and

~~a central network authority~~ , ~~coupled to receive said~~ comprising

means for receiving the accurate timing information and the timing information received by the mobile unit from the base station; configured to generate association data associating said

means for creating an association between the accurate timing information with base station and the timing information maintained by said received from the base station ; and

~~to provide said accurate~~ means, responsive to the association, for updating the timing information and association data to said base station to provide updated network timing at said maintained by at least one base station.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO. 09/971,990	FILING DATE 10/04/2001	FIRST NAMED INVENTOR Stephen W. Edge	ATTORNEY DOCKET NO. 2001 P 14495 US
-------------------------------	---------------------------	---	--

**Response To Official Action**

EXAMINER Tieu, Binh Kien
-----------------------------

ART UNIT 2614	PAGE NUMBER 9
------------------	------------------

18. (Cancelled)

19. (Currently Amended) The network timing system of claim 17, ~~wherein said~~ where  
the processing device to derive accurate timing information is located at one of said a mobile  
unit and said or the central network authority.

20. (Currently Amended) The network timing system of claim 17, ~~wherein said~~  
~~further comprising a plurality of mobile units in a plurality of areas, each area serviced by at~~  
~~least one base station, wherein said central network authority is configured to provide updated~~  
~~network timing at each of said the base stations~~  
where the central network authority comprises means for providing at least a portion of the  
association to a plurality of the base stations.

21. (Currently Amended) The network timing system of claim ~~[[20]]~~ 17, ~~wherein said~~  
~~central network authority is configured to provide updated network timing information to one or~~  
~~more of said plurality of mobile units~~ where the central network authority further comprises  
means for providing at least a portion of the association to at least one mobile unit.

22. (Cancelled)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/971,990	10/04/2001	Stephen W. Edge	2001 P 14495 US

**Response To Official Action**

EXAMINER
Tieu, Binh Kien

ART UNIT	PAGE NUMBER
2614	10

23. (Currently Amended) The network timing system of claim 17, ~~wherein said where~~  
~~signal data is GPS signal data and wherein said processing device, located at one of~~  
~~said mobile unit and said the central network authority, is configured to derive GPS~~  
the signal data is comprises global positioning satellite signal data; and  
the processing device comprises means for deriving global positioning satellite timing  
information from said the GPS global positioning satellite signal data.

24. (Currently Amended) The network timing system of claim 23, ~~wherein said~~  
~~association data comprises:~~  
~~information identifying said base station;~~  
~~information identifying the base station time at which said GPS signal data is~~  
~~detected; and~~  
~~said GPS timing information~~  
where the association further comprises the identity of the base station.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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-------------------------------	---------------------------	---	--

**Response To Official Action**

EXAMINER Tieu, Binh Kien
-----------------------------

ART UNIT 2614	PAGE NUMBER 11
------------------	-------------------

25. (Currently amended) A network timing method ~~[[in]]~~ for a network including comprising a central network authority and a plurality of areas each serviced by at least one base station, where the base station maintains timing information, comprising:

~~detecting~~ receiving, at a mobile unit in one of ~~said the~~ the areas, ~~GPS~~

the timing information maintained by the base station; and

global positioning satellite signal data;

deriving, at ~~one of said the~~ the mobile unit ~~and said or the~~ central network authority, ~~GPS~~  
global positioning satellite timing information from ~~said GPS~~ the signal data;

~~associating said GPS~~ creating an association comprising the global positioning satellite  
timing information ~~with base station~~ and the timing information received from ~~said the~~ the base  
station ~~in said area~~; and

in response to the association, updating ~~network the~~ the timing information ~~for said~~  
maintained by the base station ~~using said GPS timing information and said base station timing~~  
information.

26. (New) The method of claim 1,  
where receiving timing information from the base station comprises receiving  
propagation delay information; and  
further comprising adjusting the timing information maintained by the base station in  
response to the propagation delay information.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/971,990	10/04/2001	Stephen W. Edge	2001 P 14495 US

**Response To Official Action**

EXAMINER
Tieu, Binh Kien

ART UNIT	PAGE NUMBER
2614	12

27. (New) The network timing system of claim 17,  
where the timing information received from the base station further comprises  
propagation delay information; and  
further comprising means, responsive to the propagation delay information, for adjusting  
the timing information maintained by the base station.